

## BIOGRAPHICAL SKETCH

NAME	POSITION TITLE		
Maryka Horsting Bhattacharyya	Senior Biochemist		
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Tufts University, Medford, MA	B.S.	1965	Chemistry (summa cum laude)
University of Wisconsin, Madison, WI	Ph.D.	1970	Biochemistry
University of Wisconsin, Madison, WI	Postdoctoral researcher	1970-1971	Biochemistry

### A. Positions and Honors

#### Positions and Employment

1971-1974 Research Associate, Biochemistry Department, University of Wisconsin  
1974-1979 Assistant Biochemist, Biological and Medical Research Division, Argonne National Laboratory  
1979-1993 Biochemist, Biological and Medical Research Division, Argonne National Laboratory  
1979-present Group Leader, Biochemistry of Metals Group, Argonne National Laboratory  
Summer2000 Acting Director, Biosciences Division, Argonne National Laboratory  
1993-present Senior Biochemist, Biosciences Division, Argonne National Laboratory

#### Honors

Summa cum laude graduation, Tufts University (1965)  
Max Tischler Prize Scholarship in chemistry (1965)  
Woodrow Wilson Fellowship (1965-1966)  
Pacesetter Award, Argonne National Laboratory (1988)  
R&D 100 Award for Blood Cadmium Assay Kit (1990)  
University of Chicago Distinguished Performance Award (1991)  
NIH Toxicology Study Section Member (1992-1996)  
Pacesetter Award, Argonne National Laboratory (2002)  
Outstanding Mentor 2002, US Department of Energy, Office of Science (2003)

#### Professional Societies

Society of Toxicology (Vice President, Women in Toxicology Specialty Section)  
American Society for Bone and Mineral Research

### B. Selected Peer-reviewed Publications (from total of ~100)

- Peterson, D. P., Huff, E. A., and Bhattacharyya, M. H. Determination of cadmium in blood, plasma, and urine by electrothermal atomic absorption spectrophotometry after isolation by anion exchange chromatography. *Anal. Biochem.* 192:434-440, 1991.
- Sacco-Gibson, N. A., Chaudhry, S., Hegstad, R., Johnston, S., Peterson, D., and Bhattacharyya, M. Cadmium effects on bone metabolism: accelerated resorption in ovariectomized, aged beagles. *Toxicol. Appl. Pharmacol.* 113: 274-283, 1992.
- Bhattacharyya, M. H., Stebbings, J. H., and Peterson, D. P. New, sensitive assay for cadmium in biological samples. In: Edited Proceedings, Seventh International Cadmium Conference, April 6-8, 1992, New Orleans, M. E. Cook, et al., eds., The Cadmium Council, Reston, VA, 1992.

- Bhattacharyya, M. H., Sacco-Gibson, N. A. and Peterson, D. P. Cadmium-induced bone loss: increased susceptibility in female beagles after ovariectomy. In: Cadmium on the Human Environment: Toxicity and Carcinogenicity, G. F. Nordberg, et al., eds., International Agency for Research on Cancer, Publ. 188, 1992.
- Wang, C.-H., and Bhattacharyya, M. H. Effect of cadmium on bone calcium and  $^{45}\text{Ca}$  in nonpregnant mice on a calcium-deficient diet: evidence of direct effect of cadmium on bone. *Toxicol. Appl. Pharmacol.* 120: 228-239, 1993.
- Whelton, B. D., J. M. Toomey, and M. H. Bhattacharyya. Cadmium-109 metabolism in mice. IV. Diet versus material stores as a source of cadmium transfer to mouse fetuses and pups during gestation and lactation. *J. Toxicol. Environ. Health* 40:531-546 (1993).
- Bhattacharyya, M. H., J. H. Stebbings, D. P. Peterson, S. A. Johnson, R. Kumar, B. D. Goun, I. Janssen, and J. Trier. Lead exposures and biological responses in military weapons systems: Aerosol characteristics and acute lead effects among U.S. Army artillerymen, ANL-93/7 (1993).
- Wang, C., S. Brown, and M. H. Bhattacharyya. Effect of cadmium on bone calcium and  $^{45}\text{Ca}$  in mouse dams on a calcium-deficient diet: evidence of Itai-Itai-like syndrome. *Toxicol. Appl. Pharmacol.* 127:320-330 (1994).
- Whelton, B. D., M. H. Bhattacharyya, D. P. Peterson, B. A. Carnes, E. S. Moretti, J. M. Toomey, and L. L. Williams. Skeletal changes in multiparous mice fed a nutrient-deficient diet containing cadmium. *Toxicology* 91:235-251 (1994).
- Bhattacharyya, M. H., J. H. Stebbings, R. P. Larsen, D. P. Peterson, B. G. Oltman, Z. Liu, and G. Strejcek. Lead exposures and biological responses in military weapons systems: effects of long-term exposure among U.S. Army artillerymen. Army Project Order No: 86PP6821 (1994).
- Wilson, A. K., E. A. Cerny, B. D. Smith, A. Wagh, and M. H. Bhattacharyya. Effects of cadmium on osteoclast formation and activity *in vitro*. *Toxicol. Appl. Pharmacol.* 140:451-460 (1996).
- Wilson, A. K. And M. H. Bhattacharyya. Effects of cadmium on bone: An *In Vivo* model for the early response. *Toxicol. Appl. Pharmacol.* 145:68-74 (1997). *Nominated best paper of the year*.
- Wilson, A. K., M. H. Bhattacharyya, S. Miller, and N. Sacco-Gibson. Ovariectomy-induced changes in aged beagles: Histomorphometry of rib cortical bone. *Calcified Tissue Int.* 62:237-243 (1998).
- Bhattacharyya, M.H., C.A. Blum, and A.K. Wilson. The role of metallothionein in cadmium-induced bone resorption. *Metallothionein IV*, C. Klaassen (ed.), Birkhauser Verlag Basel/Switzerland, pp. 473-476 (1998).
- Blum, C.A., A.K. Wilson, and M.H. Bhattacharyya. A nest box to facilitate excreta collection from mouse dams through pregnancy, parturition, and lactation. *Contemporary Topics in Laboratory Animal Science*, 38:71-77, (1999).
- Solaiman, M., M Jonah, W Miyazaki, G Ho, and MH Bhattacharyya. Lactation-Induced increases in metallothionein in mouse liver, kidneys, and duodenum. *Toxicological Sciences*, 60:184-192 (2001).
- Brako, EE, AK Wilson, MM Jonah, CA Blum, EA Cerny, KL Williams, and MH Bhattacharyya. Effect of metallothionein on cadmium pathways during gestation and lactation in control and metallothionein-knockout mice, *Toxicol Sci*, 71:154-163, (2002).
- Regunathan, A., J. Villarreal, E.A. Cerny, and M.H. Bhattacharyya. Role of *fos* and *src* in cadmium-induced decreases in bone mineral content in mice. *Toxicol. Appl. Pharmacol.*, 185:25-40 (2002).
- Cerny, E.A. and M.H. Bhattacharyya. Low volume, high sensitivity assay for cadmium in blood and urine using conventional atomic absorption spectrophotometry. *Anal. Biochem.* 314:180-193 (2003).
- Regunathan, A, DA Glesne, AK Wilson, J Song , D Nicolae, T Flores, and MH Bhattacharyya. Microarray analysis of changes in bone cell gene expression early after cadmium gavage in mice. *Toxicol Appl Pharmacol*, 191:272-293, (2003).
- MacDonell, M, MH Bhattacharyya, M Finster, M Williams, K Picel, Y-S Chang, and J Peterson. Risk-based concentrations to support method validation for drinking water and air. National Homeland Security Research Center, U.S. Environmental Protection Agency, 131pp (2006).
- Bhattacharyya, MH, M Finster, S Williams-Scott, Y-S Chang, J Zhao and B Gadagbui. Provisional Advisory Levels for Methyl Parathion. National Homeland Security Research Center, U.S. Environmental Protection Agency, 154pp (2006).